

a.) Amendment to the Title

Please amend the title to read --RECURSIVE REFLECTIVE DISPLAY  
DEVICES--.

b.) Amendment to the Specification

Please insert the following paragraph at page 1, after line 5 and before line 6:

This application is a national phase of PCT Application No. PCT/JP03/12873 filed October 8, 2003.

Please amend the paragraph starting at page 1, line 35 and ending at page 2, line 12 to read as follows.

The invention also relates to EL internally illuminated retroreflective display devices which exchange ~~informations~~ information with radio frequency identification units via communication antennas and enable, particularly at night, recognition from remote places of location of the display devices of the present invention, approach of the owners of the devices or viewers thereof, and the information given by letters or patterns indicated on the display devices as illuminated by illuminators utilizing EL principle, which are provided at the back of the retroreflective layers, or by radiating light externally to enable recognition of such visual information from remote places in accordance with the principle of retroreflection, even when the EL internal illuminators are unable to emit light due to such troubles as power failure.

Please amend the paragraph at page 2, lines 20-30 to read as follows.

A conventional IC card comprises radio frequency identification unit or units having built-in integrated circuit or circuits, a carrier layer to carry said identification unit or units, said layer comprising a core layer and/or an inner layer, and an upper protective layer and a lower protective layer for protecting the upper face and the lower face of the carrier layer, respectively. This laminate exchanges ~~informations~~ information between the integrated circuit or circuits and external units through external contact terminals provided on, for example, said upper protective layer, or a communication antenna which is installed on the carrier layer.

Please amend the paragraph starting at page 10, line 35 and ending at page 11, line 7 to read as follows:

As CC units which are retroreflective units used in preferred embodiments of the present invention, at least one type of ~~units~~ unit selected from the group consisting of triangular-pyramidal cube-corner units, full cube-type cube-corner units, tent-type cube-corner units and cross-prismatic units can be used. Of these, triangular-pyramidal cube-corner units are preferred, because they easily form a micro size retroreflective element and hence enable to form thin products.

Please amend the paragraph at page 11, lines 22-31 to read as follows.

Moreover, in the case of a non-contact type integrated circuit enclosed retroreflective product, total internal reflection type ~~CC units~~ CC units are preferred

because they are free from radio frequency noise due to the absence of metallic thin film layer, unlike said micro glass bead retroreflective units or specular reflection type CC units. Similar suppression of radio frequency noise can be accomplished when no metallic thin film layer is laid on micro glass bead retroreflective units, but it invites reduction in the retroreflective area and in consequence, reduction in advance ~~recognizability~~.  
recognizability.

Please amend the paragraph at page 12, lines 24-33 to read as follows.

A preferred example of retroreflective sheeting using such enclosed lens type retroreflective units is retroreflective sheeting whose retroreflective portion is formed of micro glass bead ~~retroreflective~~ retroreflective units of 30 – 500  $\mu\text{m}$  in diameter. The surface of such sheeting is covered with a smooth and transparent surface protective layer. Where the retroreflective units have diameters less than 30  $\mu\text{m}$ , diffusion of light due to diffraction becomes excessive to undesirably reduce retroreflectivity. Whereas, retroreflective units having diameters exceeding 500  $\mu\text{m}$  render the sheeting thickness too large and are undesirable.

Please amend the paragraphs at page 17, lines 1-17 to read as follows.

Moreover, it is preferable to add a surface active agent to the chemical etching solution in order to improve its wettability of, or permeability into, the metallic thin film layer. ~~Kind~~ The type of useful surface active agent is not particularly restricted. Whereas, those preferred are cationic surfactants such as amine type, ammonium salt type

and pyridine derivatives; anionic surfactants such as sulfated oil, fatty acid salts, sulfated ester oils and alkyl sulfates; and nonionic surfactants such as partial fatty acid esters of polyhydric alcohols and fatty acid-ethylene oxide adducts.

Though the printing method is not critical, gravure printing, screen printing or ink jet method are preferred. Moreover, as other removing method, it is possible to use dry etching, laser illumination or mechanical removing method such as sandblasting.

As mechanical processing means, a method of processing a metallic thin plate into an antenna shape by punching or laser processing, or processing a thin metallic wire into a loop-form, and mounting so-processed such antenna on the carrier layer can be readily practiced.

Please amend the paragraphs starting at page 20, line 22 and ending at page 21, line 5 to read as follows.

As such methods for adhering, connecting or integrating, those using various adhesives, adhesive sheet, tackifier, tack sheet or the like; heat sealing with heating and pressing; or mechanical fixing, can be applied either singly or in suitable combination. The binding can also be effected by such means as various heat-sensitive adhesives, pressure-sensitive adhesives; thermosetting, UV curing or electron beam curing type crosslinkable adhesives, or thermofusion.

In particular, such various adhesives, adhesive sheet, tackifier or tack sheet are preferably optically transparent and excel in durability. It is also preferred to add UV absorber, light stabilizer and the like to improve durability.

Particularly, where the present device is to be adhered to a light-transmitting substrate, it is preferable to use a poly(meth)acrylate resin type pressure-sensitive adhesive from viewpoints of light transmittability and heat resistance. It is also preferable to add the same ultraviolet absorber, light stabilizer or antioxidant as those used for the top-protective layer, each at a rate of 0.05 to 5 wt%, for improving weatherability and heat resistance.

Please amend the paragraph at page 22, lines 14-24 to read as follows.

~~Above-described~~ The above-described information display section and illuminator are integrated by a housing which encloses them. The shape of the housing is not critical, which can be suitably selected among rectangular parallelepipeds, columns and the like. The material making up said body again is not critical, various materials such as plastics, wood, stone and the like can be used either singly or in combination. While it is preferred for the housing to take an hermetically sealed construction to prevent infiltration of water and dust from outside, a construction allowing discharge of internally generated vapor, heat or externally infiltrated water to outside may also be adopted.

Please amend the paragraph at page 23, lines 15-26 to read as follows.

The retroreflective display device of the present invention, which is constructed as above-described adopts a retroreflective layer carrying a large number of retroreflective units in a retroreflective display device equipped with radio frequency identification integrated circuit or circuits, as a means to enable viewers to recognize the

presence of products according to the present invention before mutual communication of the device with reader/writers become possible, without using any special recognition means and even at night, said reflective layer being capable of reflecting light from an external source toward the light source. Also by providing an illuminator at the back of said retroreflective display device, the device can be recognized from a wide scope of observation sites.

Please amend the paragraph at page 28, lines 16-19 to read as follows.

An internal total reflection type prismatic retroreflective layer may also be ~~sued~~ used. This retroreflective layer is preferred because no metallic thin film layer is provided on the retroreflective units therein and hence it is free of noises caused by radio frequency.

Please amend the paragraph at page 32, lines 13-18 to read as follows.

In Fig. 14, 41 is a surface-protective layer, 43 is a retroreflective layer with an information display layer provided on its surface, 44 is a layer in which radio frequency identification unit or units are installed, 45 is a light source means emitting electroluminescence, which is connected to an external source with typical electric wire 47 ~~and (unillustrated) and~~ 48 is a back-protective layer.